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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,966	10/24/2003	Mark A. Cleveland	024.0029	1845
29906	7590	09/01/2004	EXAMINER	
INGRASSIA FISHER & LORENZ, P.C. 7150 E. CAMELBACK, STE. 325 SCOTTSDALE, AZ 85251			PARSLEY, DAVID J	
			ART UNIT	PAPER NUMBER
			3643	

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/692,966	<b>Applicant(s)</b> CLEVELAND, MARK A.	
	<b>Examiner</b> David J Parsley	<b>Art Unit</b> 3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10-24-03</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## **Detailed Action**

### ***Election/Restrictions***

- I. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-11, drawn to an apparatus of a low shock separation joint, classified in class 102, subclass 378.
  - II. Claims 12-15, drawn to a method of reducing shock in an explosive, classified in class 102, subclass 377.
  - III. Claims 16-20, drawn to a method of making an explosive separation joint, classified in class 86, subclass 56.

Inventions I and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another materially different process such as the male member and female member can be made integral and not require fastening.

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP

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§ 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product such as a linear shaped charge explosive.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group III, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Brett Carlson on 8-23-04 a provisional election was made with traverse to prosecute the invention of group I, claims 1-11. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Specification*

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it contains legal phraseology in particular the term "said" in line 6. Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities: on page 6 in line 7 of paragraph [0024], "506" should be - -507- -.

Appropriate correction is required.

### *Drawings*

4. Figure 6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 602. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page

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header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

5. Claim 5 is objected to because of the following informalities: in line 2 “place” should be - -placed- -. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,129,306 to Fauvel or U.S. Patent No. 5,585,596 to Richards et al.

Referring to claim 1, Fauvel and Richards et al. disclose a low shock separation joint for coupling a first structure to a second structure comprising, a male member – at 5 of Fauvel and – at 16 of Richards et al., having a first major surface and a second major surface wherein at least one projection is formed on the first and second major surface – see for example proximate 5c

and 11b in figure 1 of Fauvel and proximate 26 in figures 3-4 of Richards et al., a female member – at 7 of Fauvel and – at 18,28-32 of Richards et al., having a first flange and a second flange – see for example figure 1 of Fauvel and figures 3-4 of Richards et al., wherein at least one projection is formed on the first and second flange – see proximate 6b,7b of Fauvel and – in figures 3-4 of Richards et al., wherein the surfaces of the at least one projection on the first and second flange are respectively mated to surfaces of the at least one projection on the first and second major surface of the male member to prevent separation of the separation joint under tensile and compressive forces – see for example figures 1-2 of Fauvel and figures 3-4 of Richards et al., and an explosive device – at 10 of Fauvel and – at 40-46 of Richards et al., placed within a cavity of the female member – see for example figures 1 and 3 of Fauvel and figures 3-4 of Richards et al.

Referring to claim 2, Fauvel and Richards et al. further disclose the female member further includes a mount – see proximate 6a,7a of Fauvel and – proximate 20 in figures 3-4 of Richards et al., for attachment to the first structure – at 2,4,11 of Fauvel and – at 10 of Richards et al.

Referring to claim 3, Fauvel and Richards et al. further disclose the female member comprises a first and a second half structure – see proximate 6c,7c of Fauvel and – see figures 3-4 of Richards et al., wherein the first half structure includes the first flange – see figures 1 and 3 of Fauvel and figures 3-4 of Richards et al., wherein the second half structure includes the second flange – see for example figures 1-2 of Fauvel and figures 3-4 of Richards et al., and wherein the first and second flanges oppose one another when the first and second half structures

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are coupled together – see for example figures 1 and 3 of Fauvel and figures 3-4 of Richards et al.

Referring to claim 4, Fauvel and Richards et al. further disclose a clevis – proximate 6c,7c of Fauvel and – proximate 32 of Richards et al., is formed for receiving the first structure – at 2,4,11 of Fauvel and – at 10 of Richards et al., when the first and second half structures of the female member are coupled together and wherein the clevis comprises a portion of both the first and second half structures of the female member – see for example figures 1 and 3 of Fauvel and figures 3-4 Richards et al.

Referring to claim 5, Fauvel and Richards et al. further disclose the male member is placed between the first and second flange and wherein the fastening of the first structure to the clevis of the female member couples the female member to the male member – see for example figures 1 and 3 of Fauvel and figures 3-4 of Richards et al.

Referring to claim 6, Fauvel and Richards et al. further disclose surfaces of the at least one projection of the first and second flange mated respectively to surfaces of the at least one projection of the first and second major surfaces of the male members are non-locking – see for example figures 1 and 3 of Fauvel and figures 3-4 of Richards et al.

Referring to claim 7, Fauvel and Richards et al. further disclose the explosive device when detonated bends the first and second flange away from the male member and wherein the first and second flange move in an arc away from the male member – see for example figures 1 and 3 of Fauvel and figures 3-4 of Richards et al.

Referring to claim 10, Fauvel and Richards et al. further disclose the male member includes a mount – at 5a1 of Fauvel and – proximate 20 of Richards et al., for attachment to the



second structure – at 3 of Fauvel and – at 12 of Richards et al. – see for example figures 1 and 3 of Fauvel and figures 3-4 of Richards et al.

Claims 8-9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Richards et al.

Referring to claim 8, Richards et al. discloses the explosive device – at 40-46, has a first volume – see figures 4a-4b, within the cavity of the female member prior to detonation, wherein the explosive device has a second volume – see figures 4c-4d, after detonation and wherein the second volume is greater than the first volume – see for example figures 4a-4d.

Referring to claim 9, Richards et al. discloses the explosive device – at 40-46, has an expandable housing – at 46, around an explosive material – at 40-42, and wherein the expandable housing does not rupture when the explosive material is detonated – see for example figures 4a-4d.

Referring to claim 11, Richards et al. discloses the female member – at 18, comprises a deformable metal – see for example column 8 lines 45-63.

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to separation joints for ordnance:

U.S. Pat. No. 3,453,960 to Qualls – shows separation joint

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U.S. Pat. No. 3,505,925 to Carr – shows separation joint

U.S. Pat. No. 3,633,456 to Carr et al. – shows separation joint

U.S. Pat. No. 3,919,939 to Murray et al. – shows separation joint

U.S. Pat. No. 4,106,875 to Jewett – shows separation joint

U.S. Pat. No. 4,879,941 to Repe et al. – shows separation joint

U.S. Pat. No. 5,992,328 to Blain et al. – shows separation joint

U.S. Pat. No. 6,076,467 to Cespedosa et al. – shows separation joint

U.S. Pat. No. 6,125,762 to Fritz et al. – shows separation joint

U.S. Pat. Appl. No. 2003/0196544 to Comtesse – shows separation joint

EP Pat. No. 1361411 – shows separation joint

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J Parsley whose telephone number is (703) 306-0552. The examiner can normally be reached on 9hr compressed.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Poon can be reached on (703) 308-2574. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Parsley  
Patent Examiner  
Art Unit 3643



**PETER M. POON**  
**SUPERVISORY PATENT EXAMINER**

8/31/04